

REMARKS

The present Amendment amends claims 1, 5, 6, 13, 14, 21 and 22, leaves claims 3, 4, 8-12, 16-20 and 24-26 unchanged and cancels claims 2, 7, 15 and 23. Therefore, the present application has pending claims 1, 3-6, 8-14, 16-22, 24 and 26.

Claims 1-5, 7, 8, 13, 15, 16 and 23 stand rejected under 35 USC §102(e) as being anticipated by Sandhu (U.S. Patent No. 6,438,389); claims 9, 11, 12, 17, 19, 20, 24 and 26 stand rejected under 35 USC §103(a) as being unpatentable over Sandhu in view of Yun (U.S. Patent No. 6,600,934); and claims 6, 10, 14, 18, 22 and 25 stand rejected under 35 USC §103(a) as being unpatentable over Sandhu in view of Krile (U.S. Patent No. 6,229,486). As indicated above, claims 2, 7, 15 and 23 were canceled. Therefore, these rejections with respect to these claims are rendered moot. These rejections with respect to the remaining claims are traversed for following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 1, 3-6, 8-14, 16-22 and 24-26 are not taught or suggested by Sandhu, Yun or Krile whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

Amendments were made to each of the claims 1, 5, 13 and 21 to more clearly recite that the present invention is directed to a method, transmitter and receiver of selecting an optimal set of antennas from a plurality of antennas for use by a transmitter or a receiver having a plurality of RF chains to transmit or receive a wireless signal on a wireless link.

According to the present invention as illustrated, for example in Fig. 1 of the present application information concerning the transmission of wireless signals on the wireless link 31 from the transmitter 30 to the receiver 32 is determined based on the wireless signals on the wireless link 31 received at the receiver 32. The transmitter 30 based on the information having been determined which could, for example be fed back by a feed back path 33 selects an optimal set of antennas from the antennas based on the information. The optimal set of antennas is a set number of the plurality of antennas. Further, according to the present invention the information includes at least one of channel capacity, diversity, special multiplexing or any other criteria used to optimize the wireless link.

The above described features of the present invention now more clearly recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the present invention as now more clearly recited in the claims are not taught or suggested by Sandhu, Yun and Krile whether taken individually or in combination with each other as suggested by the Examiner.

It should be noted that Sandhu is prior art relative to the present invention only under 35 USC §102(e). Further, it should be noted that Sandhu is assigned to the same Assignee of the present application. Thus, Sandhu cannot be used for obviousness type purposes to reject the claims of the present application in accordance with 35 USC §103(c).

Sandhu simply teaches a wireless communication system having several antennas that are electronically controlled so as to form a plurality of distinct beams

each being periodically measured for signal quality. As illustrated, for example, in Fig. 1 of Sandhu, a plurality of antennas 20 feed a wireless signal received by the antennas into a beam former 22 that has a plurality of output beam signals 24 each corresponding to a distinct beam 52. As taught in Sandhu, one of the beam signals 24 is supplied to the quality measurement (QM) switch 30 which feeds the output beam signal to the RF chain 44 which supplies the signal to the signal quality measurement device 46. The signal quality measurement device 46 measures the quality of the output beam signal and based on the measured quality updates the switch setting so that the best beams are used for each subscriber.

As is quite clear from the above, the wireless communication system as taught by Sandhu is directed to a communication system operating in the receiving mode which receives various beams through a plurality of antennas and perform a quality measurement with respect to one of the beam signal so as to determine the best beam signal to be used with the subscriber. Thus, in Sandhu the receiving apparatus includes both the quality measurement device which measures quality of the received signal and causes a selection of a particular beam to be performed.

The features of the present invention as now more clearly recited in the claims describe that information regarding transmission of wireless signals on the wireless link is determined, for example, at the receiver 32 separated from the transmitter 30 and that such transmitter upon receipt of such information selects an optimal antenna for transmission. Such features are not taught or suggested by Sandhu which merely teaches a communication system which operates only with respect to received signals at a receiver and that quality measurements are made within the

communication system on the received signal. Thus, the quality of the wireless link for a transmitter has not been properly tested in Sandhu, for example, at a receiver wherein the quality of the wireless link at the receiver is measured to obtain the actual quality of the wireless link as it may exist in the environment and the measured quality is sent back to the transmitter. Such features are clearly not taught or suggested by Sandhu.

Further, there is no teaching or suggest in Sandhu that the determination of information performed with respect to the wireless link in the environment includes a determination of information such as, for example, channel capacity, diversity, spatial multiplexing or the like as in the present invention. Sandhu simply teaches that a quality measurement is performed on a received signal in the receiver itself.

Thus, Sandhu fails to teach or suggest determining, based on wireless signals on the wireless link received at a receiver, information concerning transmission of wireless signals on the wireless link and selecting, at the transmitter, an optimal set of antennas from the antennas based on the information as recited in the claims.

Further, Sandhu fails to teach or suggest that the information includes at least one of channel capacity, diversity, spatial multiplexing or any other criteria used to optimize the wireless link as recited in the claims.

Therefore, as is quite clear from the above, the features of the present invention as now more clearly recited in claims 1, 3-5, 8, 13 and 16 are not taught or suggested by Sandhu whether taken individually or in combination with any of the other references of record. Accordingly, reconsideration and withdrawal of the 35

USC §102(e) of claims 1, 3-5, 8, 13 and 16 as being anticipated by Sandhu is respectfully requested.

As indicated above, Sandhu is assigned to the same Assignee as the present application and only qualifies as prior art relative to the present invention under 35 USC §102(e). As set forth in 35 USC §103(c), references such as Sandhu do not qualify as prior art against the claimed invention if the reference and the claimed invention were at the time the invention was made, owned by the person or subject to an obligation of assignment to the same person. The Examiner's attention is directed to MPEP §706.02(I)(1).

In accordance with MPEP §706.02(I)(2) Applicants hereby provide evidence to establish common ownership of Sandhu and the claimed invention of the present application as follows. Specifically, Applicants hereby, through the undersigned Attorney, state that the application containing the claimed invention and Sandhu, at the time the claimed invention was made, were owned by or subject to an obligation of assignment to the same person, namely The Board of Trustees of the Leland Stanford Junior University.

Therefore, the 35 USC §103(a) rejection of claims 9, 11, 12, 17, 19, 20, 24 and 26 as being unpatentable over Sandhu in view of Yun and the 35 USC §103(a) rejection of claims 6, 10, 14, 18, 22 and 25 as being unpatentable over Sandhu in view Krile are rendered moot and Applicants respectfully request the Examiner to reconsider and withdraw these rejections.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 1-5, 7, 8, 13, 15, 16, and 23.

In view of the foregoing amendments and remarks, applicants submit that claims 1, 3-6, 8-14, 16-22 and 24-26 are in condition for allowance. Accordingly, early allowance of claims 1, 3-6, 8-14, 16-22 and 24 -26 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER & MALUR, P.C., Deposit Account No. 50-1417 (530.38358X00).

Respectfully submitted,

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